

Name: _____ Date: _____ Period: _____

Unit 1 Practice Test

Variables and Translations. Write an algebraic expression for each phrase.

a. the sum of 5 and three times a number _____

b. 8 minus the product of 9 and a number _____

Define variables and write an equation to model the following situation.

a. The total cost of gas is the number of gallons times \$3.79.

b. The perimeter of a regular octagon is 8 times the length of one side.

rGEMDAS. Simplify the following expressions.

$$2[(13 - 7)^2 \div 3]$$

$$12 + 3[18 - 5(16 - 13)]$$

$$36 - (4 + 5 \cdot 4)$$

$$9 + [4 - (10 - 9)^2]^3$$

Evaluate Expressions. Evaluate each expression. Use $a = 3$ $b = -2$ $c = 1$

$$2a^2 - (4b + c)$$

$$9(a + 2b) + c$$

$$4a - b^2$$

$$\frac{2a + b}{2}$$

Operations with Integers. Simplify.

$$|-9| = \underline{\hspace{2cm}}$$

$$5 + |5 - 9| = \underline{\hspace{2cm}}$$

$$5|6 - 7| + 6 = \underline{\hspace{2cm}}$$

Distributive Property. Simplify.

$$-4(2x + 6)$$

$$15x + 3$$

$$27x - 9$$

$$8 - (4x + 3) - 10x + 6$$

Properties of Numbers. Simplify the expression. Justify each step.	
$3(2x - 4) + 2x$	Expression

What are the four properties that allow us to solve equations?

Real Numbers. Name the set of numbers to which each number belongs.			
-3.21	$-\frac{1}{2}$	18	$\sqrt{7}$

Describe the difference between irrational and rational numbers. Must be at least THREE SENTENCES.
